

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	3.3mΩ@10V	140A

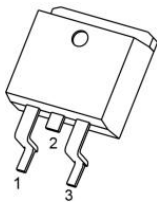
Feature

- Fast Switching
- Low Gate Charge and Rds(on)
- Advanced Split Gate Trench Technology
- 100% Single Pulse avalanche energy Test

Applications

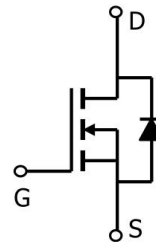
- DC-DC Converters
- Power Management

Package

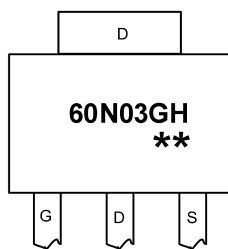


TO-263(G:1 D:2 S:3)

Circuit diagram



Marking



60N03GH =Device Code
** =Week Code

Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V _{DS}	60	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current ¹ (Tc=25°C)	I _D	140	A
Pulsed Drain Current ²	I _{DM}	560	A
Single Pulse Avalanche Energy ³	E _{AS}	961	mJ
Total Power Dissipation ⁴ (Tc=25°C)	P _D	140	W
Thermal Resistance Junction-Case ¹	R _{θJC}	0.89	°C/W
Storage Temperature Range	T _{STG}	-55 to 150	°C
Operating Junction Temperature Range	T _J	-55 to 150	°C

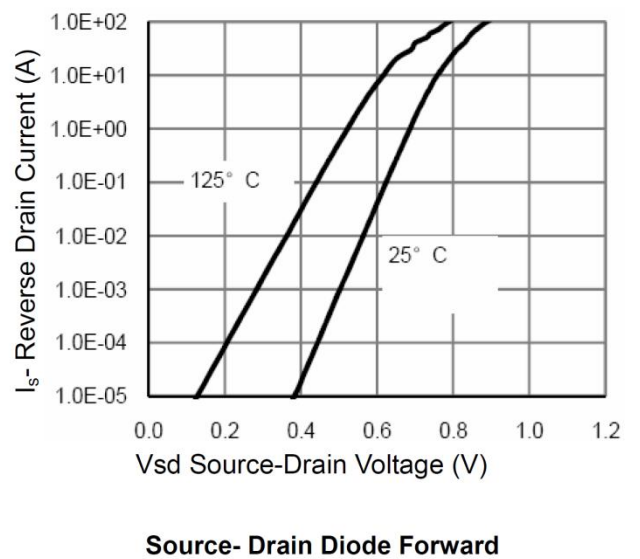
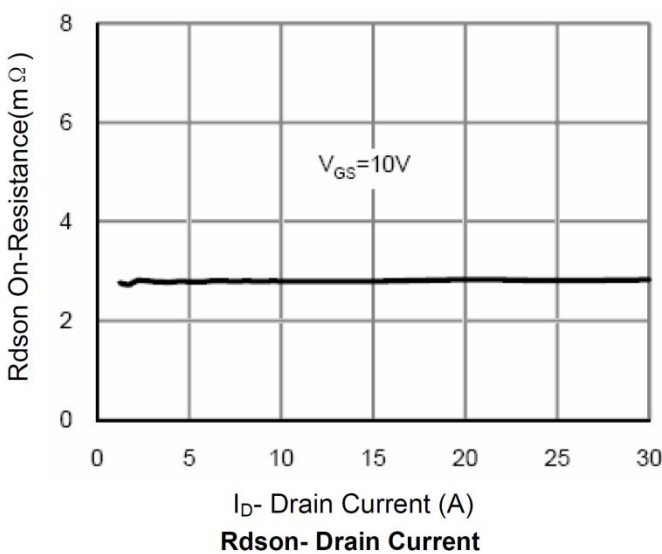
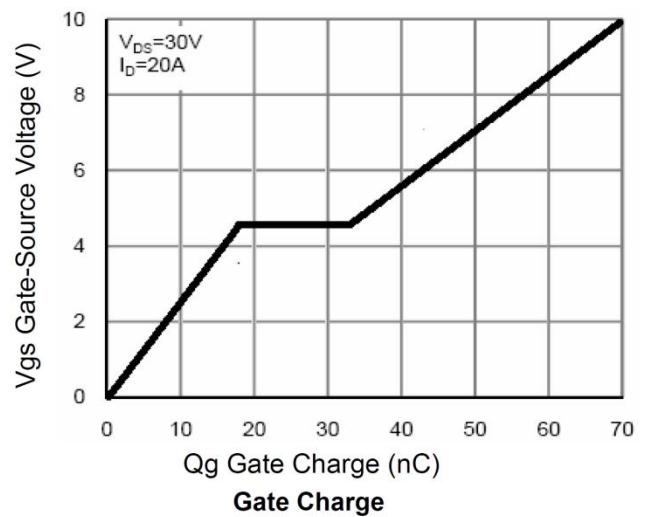
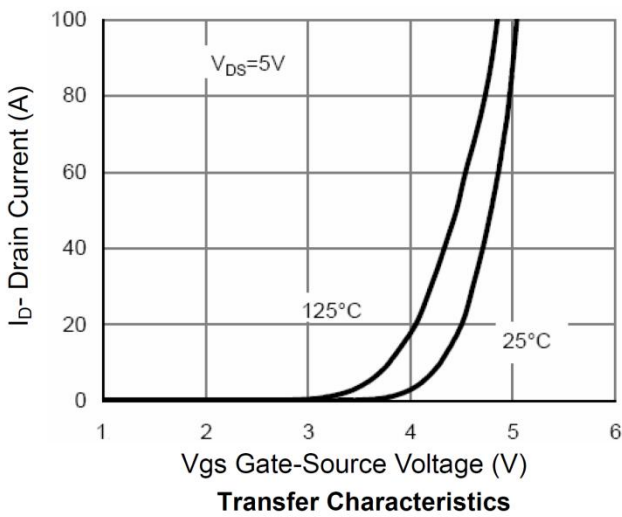
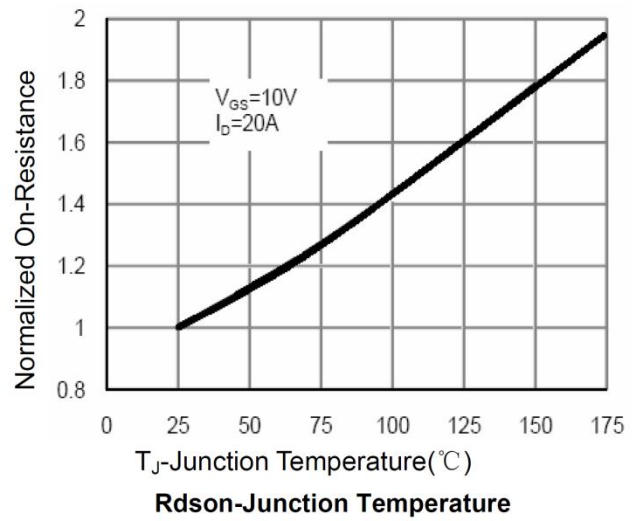
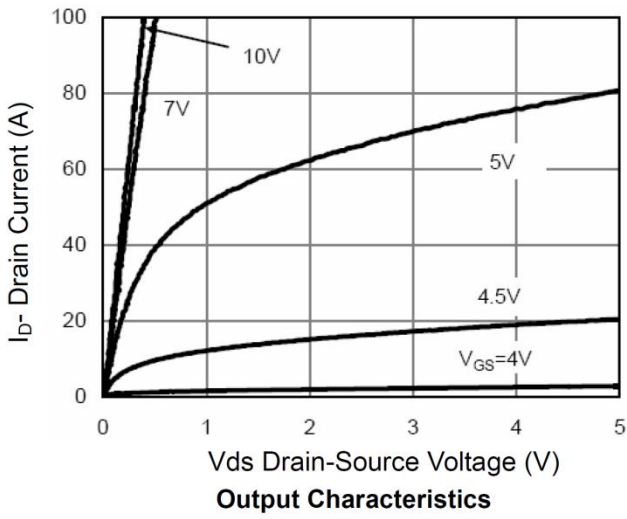
Electrical characteristics (Ta=25°C, unless otherwise noted)

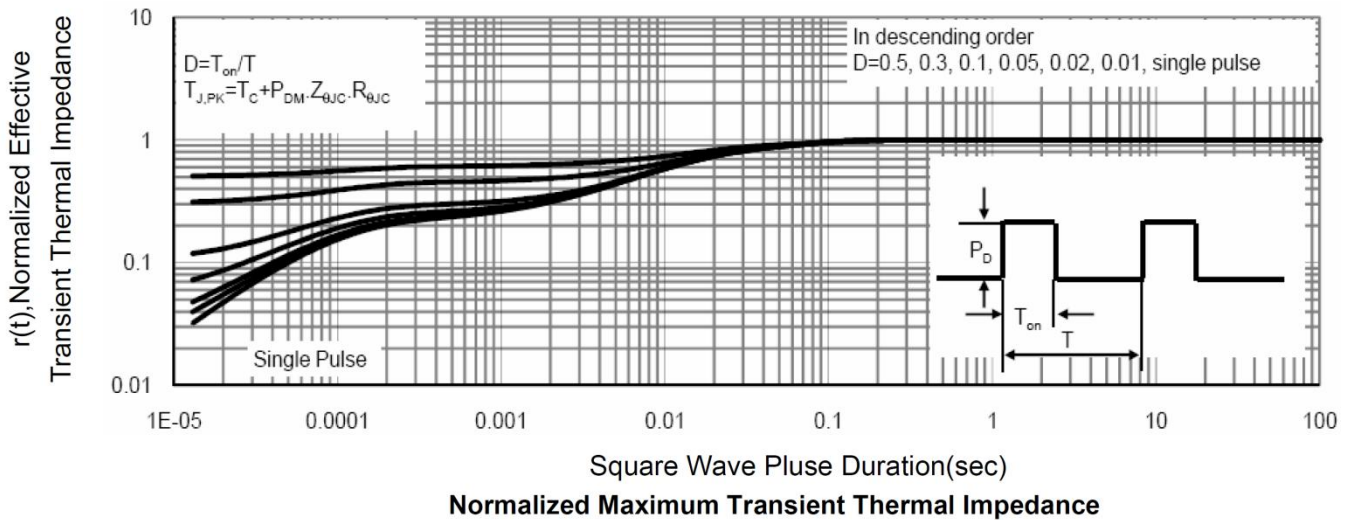
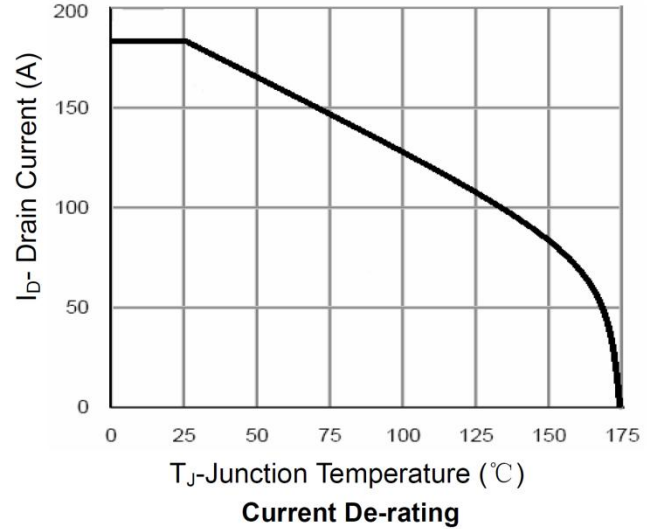
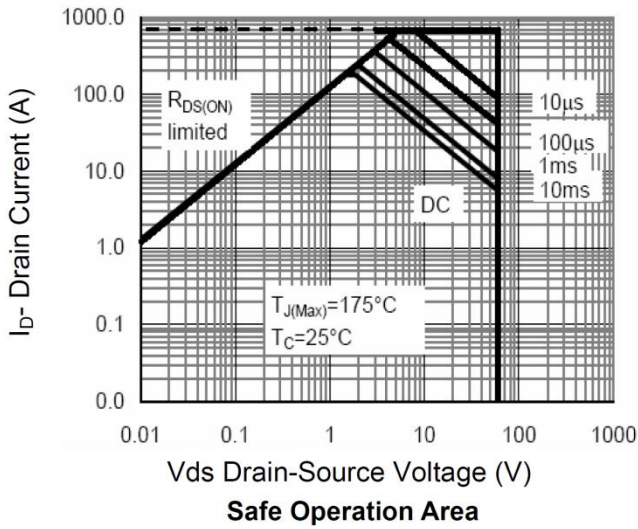
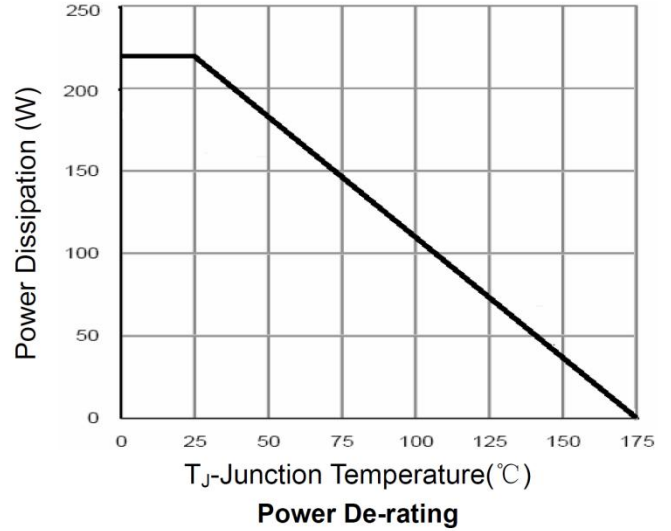
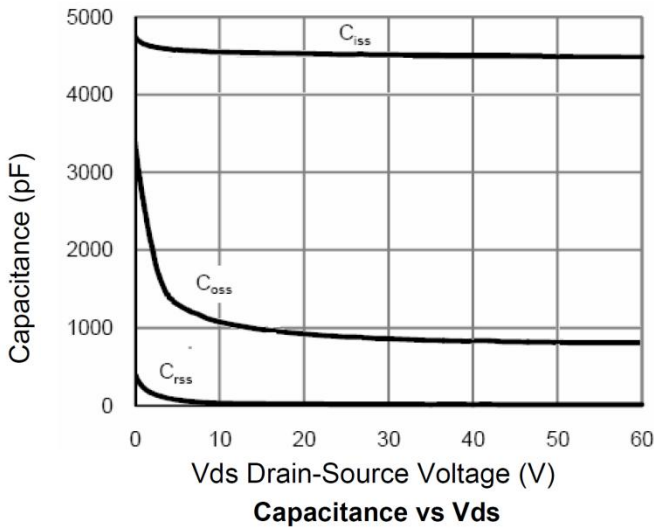
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V , I _D =250uA	60	---	---	V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =48V , V _{GS} =0V	---	---	1	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V , V _{DS} =0V	---	---	±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =250uA	2.0	2.5	4.0	V
Static Drain-Source On-Resistance ²	R _{DS(ON)}	V _{GS} =10V , I _D =20A	---	3.3	4.2	mΩ
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} =30V , V _{GS} =0V , f=1MHz	---	4250	---	pF
Output Capacitance	C _{oss}		---	975	---	
Reverse Transfer Capacitance	C _{rss}		---	41	---	
Switching Characteristics						
Total Gate Charge	Q _g	V _{DS} =30V , V _{GS} =10V , I _D =20A	---	68	---	nC
Gate-Source Charge	Q _{gs}		---	19	---	
Gate-Drain Charge	Q _{gd}		---	14	---	
Turn-On Delay Time	T _{d(on)}	V _{DD} =30V , V _{GS} =10V , R _G =4.7Ω, I _D =20A	---	6	---	ns
Rise Time	T _r		---	12	---	
Turn-Off Delay Time	T _{d(off)}		---	24	---	
Fall Time	T _f		---	5	---	
Diode Characteristics						
Diode Forward Voltage ²	V _{SD}	V _{GS} =0V , I _S =1A , T _J =25°C	---	---	1.2	V

Note :

- The data tested by surface mounted on a 1 inch² FR-4 board with 20Z copper.
- The data tested by pulsed , pulse width ≤ 300us , duty cycle ≤ 2%
- The EAS data shows Max. rating . The test condition is V_{DD}=30V,V_{GS}=10V,L=0.5mH,R_G=25Ω
- The power dissipation is limited by 150°C junction temperature
- The data is theoretically the same as I_D and I_{DM} , in real applications , should be limited by total power dissipation.

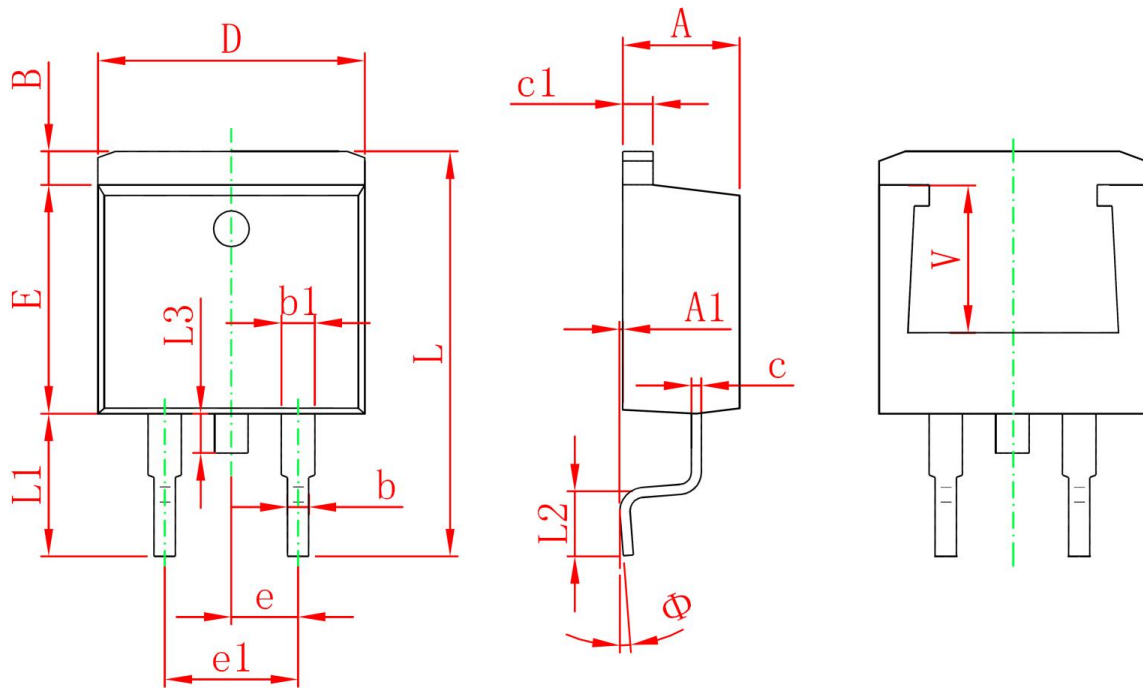
Typical Characteristics







TO-263 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.120	1.420	0.044	0.056
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	14.940	15.500	0.588	0.610
L1	4.950	5.450	0.195	0.215
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
φ	0°	8°	0°	8°
V	5.600 REF.		0.220 REF.	

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [Siliup](#) manufacturer:

Other Similar products are found below :

[IRFD120](#) [IRFY240C](#) [JANTX2N5237](#) [2SK2267\(Q\)](#) [BUK455-60A/B](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#)
[IPS70R2K0CEAKMA1](#) [SQD23N06-31L-GE3](#) [TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [EFC2J004NUZTDG](#)
[DMN1053UCP4-7](#) [SQJ469EP-T1-GE3](#) [NTE2384](#) [DMC2700UDMQ-7](#) [DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#)
[DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#)
[DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [DMN2990UFB-7B](#) [IPB80P04P405ATMA2](#) [2N7002W-G](#) [MCAC30N06Y-](#)
[TP](#) [MCQ7328-TP](#) [NTMC083NP10M5L](#) [NVMFS2D3P04M8LT1G](#) [BXP7N65D](#) [BXP4N65F](#) [AOL1454G](#) [WMJ80N60C4](#) [BXP2N20L](#)
[BXP2N65D](#) [BXT1150N10J](#) [BXT1700P06M](#) [TSM60NB380CP](#) [ROG](#) [RQ7L055BGTCR](#) [DMNH15H110SK3-13](#)